

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A LIN bus system comprising a plurality of
2 modules linked to a LIN bus along which electronic data or instructions can be sent to and from
3 each said module, at least one of said modules being non configured and having no unique
4 identification address associated therewith, said at least one module having a unique code
5 associated therewith, said system further including configuration means which interrogates said
6 modules and detects the unique code of said at least one non-configured module and transmits a
7 configuration signal to the module to configure the module, each said non-configured module
8 including counter means which is incremented each time a non-configured module is configured,
9 said counter of each non-configured module, once configured, providing a unique code which is
10 indicative of the position of the module in the system.
- 1 2. (Original) A LIN bus system as claimed in claim 1 wherein the at least
2 one module having a unique code associated therewith is a reconfigurable module having means
3 for being configured with an ID and also having embedded within it at the manufacturing stage a
4 fixed unique Chip Identification Code (CIN) for use during a configuring operation.
- 1 3. (Original) A LIN bus system as claimed in claim 2 wherein said
2 reconfigurable module is a module compatible with the LIN bus Standard.
- 1 4. (Original) A LIN bus system as claimed in claim 3 wherein said
2 reconfigurable module has two LIN Bus interface pins connected by a series resistor.
- 1 5. (Original) A LIN bus system as claimed in claim 4 wherein the series
2 resistor is a 1 ohm resistor.

1 6. (Currently Amended) A LIN bus system as claimed in claim 1 ~~any~~
2 ~~preceding claim~~ wherein said reconfigurable module further comprises a pull up resistor and a
3 pull up current source for forcing a pull up current through the pull up resistor.

1 7. (Currently Amended) A LIN bus system as claimed in claim 3 ~~any one of~~
2 ~~claims 3 to 6~~ wherein if a number of said reconfigurable modules are connected in a daisy chain
3 manner standard LIN Bus arbitration rules apply for selecting one module from the daisy chain.

1 8. (Currently Amended) A LIN bus system as claimed in claim 7 wherein
2 said reconfigurable module further comprises a pull up resistor and a pull up current source for
3 forcing a pull up current through the pull up resistor and wherein said pull up current only flows
4 whilst said module is selected.

1 9. (Currently Amended) A LIN bus system as claimed in claim 1 ~~any~~
2 ~~preceding claim~~ wherein said reconfigurable module further comprises a position counter, which
3 may be incremented to indicate the position of the module in a daisy chain.

1 10. (Currently Amended) A LIN bus system as claimed in ~~any preceding~~
2 claim 1 wherein said reconfigurable module further comprises a random code generator for
3 generating a random code of a plurality of bits in length to identify the module as an alternative
4 to the CIN code.

1 11. (Currently Amended) A LIN bus system as claimed in ~~any preceding~~
2 claim 1 wherein said unique code is a CIN.

1 12. (Currently Amended) A LIN bus system as claimed in anyone of claim 1
2 ~~claims 1 to 10~~ wherein said unique code is a randomly generated code.

1 13. (Currently Amended) A LIN bus system as claimed in ~~any preceding~~
2 claim 1 wherein said LIN Bus system comprises a plurality of non-configured reconfigurable
3 modules connected together in a daisy chain manner.

1 14. (Original) A LIN bus system as claimed in claim 13 wherein a
2 configuration sequence is performed to configure each of the plurality of non-configured
3 reconfigurable modules.

1 15. (Original) A LIN bus system as claimed in claim 14 wherein during a
2 configuration sequence the bus master transmits a configuration request and all non-configured
3 reconfigurable modules respond by transmitting a reply consisting of their unique code.

1 16. (Original) A LIN bus system as claimed in claim 15 wherein standard
2 LIN bus arbitration rules apply, wherein active states win over recessive states, and one non-
3 configured reconfigurable module will thus win the arbitration and become the 'selected
4 module'.

1 17. (Currently Amended) A LIN bus system as claimed in claim 16 wherein
2 the selected module then forces a current through ~~[[its]]~~ a pull up resistor.

1 18. (Currently Amended) A LIN bus system as claimed in claim 17 wherein
2 non-selected non-configured reconfigurable modules ~~[[can]]~~ monitor ~~[[this]]~~ the current through
3 their series resistors and thereby determine that a selected module is responding.

1 19. (Currently Amended) A LIN bus system as claimed in ~~any preceding~~
2 claim 1 wherein each non-configured reconfigurable module incorporates a position counter
3 incremented on each occasion that a selected module responds with a forced current.

1 20. (Currently Amended) A LIN bus system as claimed in claim 19 wherein
2 the position counter on a particular non-configured reconfigurable module is not incremented
3 when the particular non-configured reconfigurable module is itself selected.

1 21. (Original) A LIN bus system as claimed in claim 20 wherein the position
2 counter on a particular non-configured reconfigurable module is not incremented after the
3 particular module has been selected.

1 22. (Currently Amended) A LIN bus system as claimed in claim 21 wherein
2 once all ~~un-configured extended capability non-configured reconfigurable~~ modules have been
3 selected each will have a position counter showing a unique position for that module within
4 [[the]] a daisy chain and this unique position counter value ~~can then be~~ is used to select a module
5 and configure it for use in the system.

1 23. (Currently Amended) A method of configuring a LIN Bus system
2 comprising a plurality of [[said]] non-configured reconfigurable modules connected in a daisy
3 chain manner comprising the steps of: transmitting a configuration request from a bus master;
4 selecting one module from the daisy chain by standard LIN bus arbitration rules; forcing a
5 current through [[the]] a pull up resistor of the selected module; incrementing [[the]] a position
6 counter of each module within the daisy chain that is not currently or previously selected;
7 repeating the above steps until each module in the daisy chain has been selected, the position
8 counters for each module thus showing its unique position in the chain; and using the unique
9 position counter value to select and configure a desired module or a plurality of desired modules.

24. (Canceled)